of a leading physicist. Prof. Niels Bohr, whose planetary theory of atomic structure is one of the great milestones of modern physics, writes : * The existence of life must be considered as an elementary fact that cannot be explained, but must be taken as a starting-point in biology, in a similar way as the quantum of action (which appears as an irrational element from the point of view of classical mechanical physics) taken together with the exiatence of the elementary particles, forms the foundation of atomic physics ' *(Nature,* 1933). This, of course, is an expression of opinion which we may well hesitate to accept. Yet it will serve to show the reader that those who know most about atoms do not share Hogben's simple faith that the most striking and fundamental peculiarity of living things —namely, their combination of extreme stability with extreme lability—is made intelligible or explained by pointing to the equilibrium of atoms as in some degree analogous to it.

[!]What experimental facts, then, seem to Needham to justify his general adhesion to the mechanistic biology, over and above his acceptance of the ' mental twist' as inevitable in his own case and in spite of his recognition of the all-importance of organization in living things ?

In an interesting volume of lectures *(Order and Life,* 1936) Needham considers at some length the problem of organization and morphogenesis and recent observations which bear upon it. Of such recent work two closely allied lines seem of most importance: the demonstration of physiological gradients by Child and the

potent
influence of what are called organizers, first demonstrated
by G. H. Speman in 1924.

The gradient is, as it were, a slope of activity of some special kind which can be traced in developing organisms.